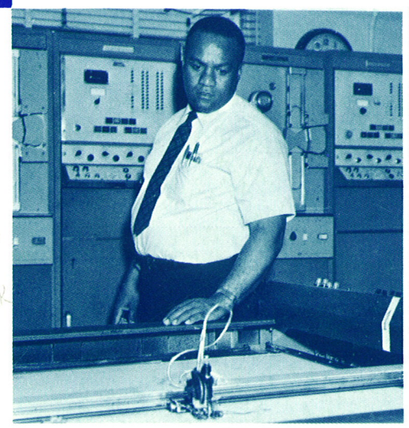
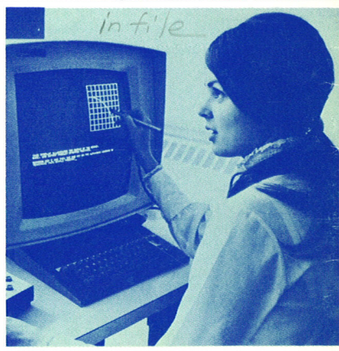
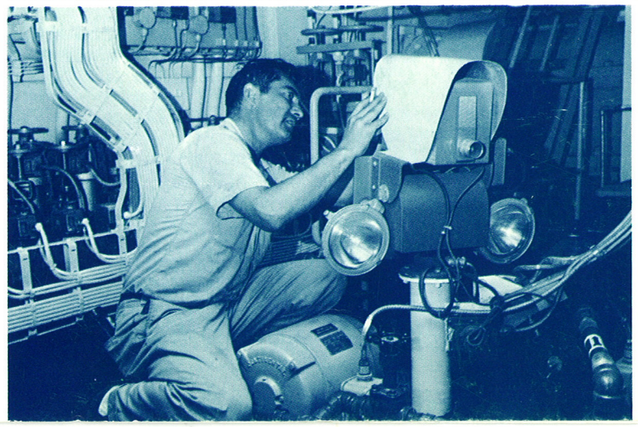
A UNITED STATES DEPARTMENT OF **COMMERCE** PUBLICATION

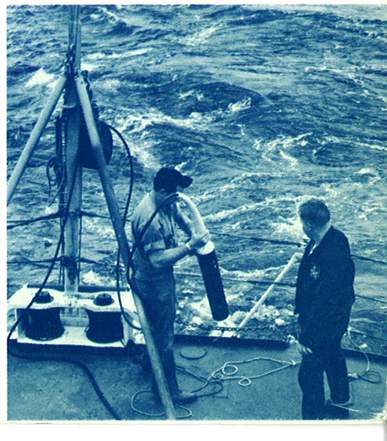
NOAA

CAREERS AND CHALLENGES





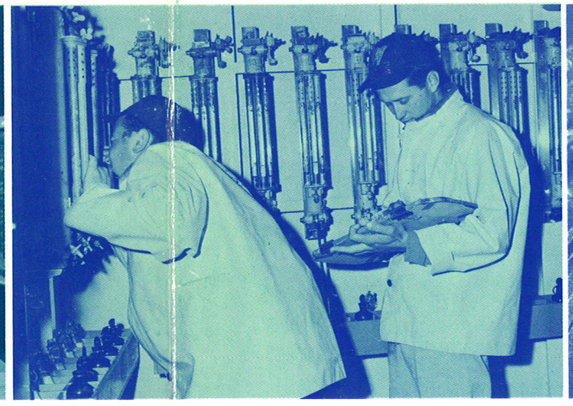




U.S. DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Photo in file
Computers



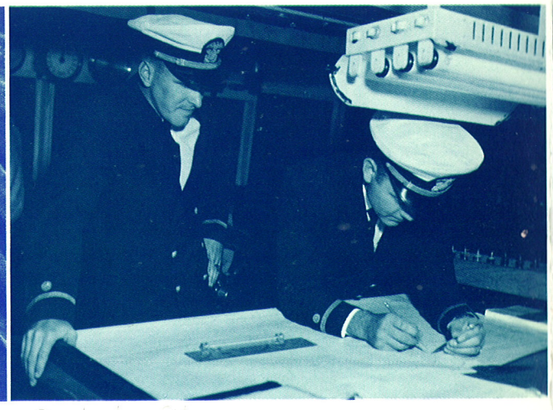


Photo in file

NOAA, created within the Department of Commerce in October 1970, combines the functions of several Federal activities in the environmental and marine biological sciences and related technologies. Through its major organizational elements—the National Ocean Survey, National Weather Service, National Marine Fisheries Service, National Environmental Satellite Service, Environmental Research Laboratories, and Environmental Data Service—NOAA carries out its broad programs of service and research.

NOAA headquarters, much of the office force, and the National Ocean Survey headquarters are located in the Washington Science Center, a campus-like setting in suburban Rockville, Md. The National Weather Service and Environmental Data Service are headquartered in Silver Spring, Md., the National Environmental Satellite Service in Suitland, Md., and the National Marine Fisheries Service in the District of Columbia. Boulder, Colorado, is headquarters for the Environmental Research Laboratories field forces—personnel assigned to geophysical observatories, fisheries laboratories, communication centers, research facilities, ship bases, mobile survey teams, and research and photographic air missions—constitute the largest part of NOAA's staff and are distributed throughout the United States and in selected foreign areas.

NOAA Career Opportunities

PHYSICISTS at NOAA participate in basic and applied research over the entire range of environmental science. Their work may be basic research in rock fracture mechanics, or they may work in a more general area, for example, large-scale atmospheric circulations. They may be involved in theoretical studies or they may work on the practical side, relating theoretical studies to a particular industry, user group, or agency investigation. They may also contribute to essentially developmental projects, as in the case of new environmental sensors and other necessary instruments. They forecast solar phenomena or the state of the upper atmosphere. They also study the physical characteristics of the earth, the oceans, or the ocean floor.

GEOPHYSICISTS are concerned primarily with operational and research programs in seismology, gravity, and geomagnetism. At NOAA, this includes basic research into earthquake mechanics and investigation of such fundamental problems as the source and time-space distribution of the earth's magnetic field, and the precise geodetic definition of the size and shape of the earth, moon, and other bodies in the solar system. They also design and develop new instruments. Geophysicists are assigned in the National Ocean Survey and NOAA Research Laboratories, and the Environmental Data Service. Some geophysicists spend much time in the field, conducting magnetic and seismological surveys, supporting geophysical observatories, and working aboard NOAA ships.

METEOROLOGISTS at NOAA analyze weather data gathered by satellites, radiosondes, and extensive networks of instrumented stations to prepare a variety of weather forecasts for the general public and for specialized groups such as aviators, mariners, and farmers. Research meteorologists are engaged in atmospheric physics research, investigating relationships between various meteorological events at all scales, extending and refining existing theory, and improving the precision of mathematical models of atmospheric processes. They are also studying, in laboratories and in the field, severe storms mechanics, and the feasibility of weather modification. They participate in studies which seek to use new observational, computational, and analytical technology in weather prediction, and contribute to development of new meteorological instruments—such as the NOAA satellite system. Where they are concerned with weather in a historical sense, meteorologists work as climatologists, collecting, analyzing, interpreting, and summarizing past weather information for locations all over the world.

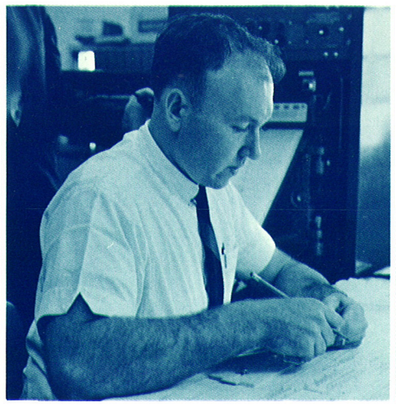
Meteorologists are assigned in the National Weather Service, Environmental Research Laboratories, and Environmental Data Service. They serve in some 300 Weather Service offices in cities across the land, at airport weather stations, in state climatological offices, or in one of NOAA's research laboratories. They also serve aboard ships, participating with NOAA's oceanographers and geophysicists in ocean-environment research.

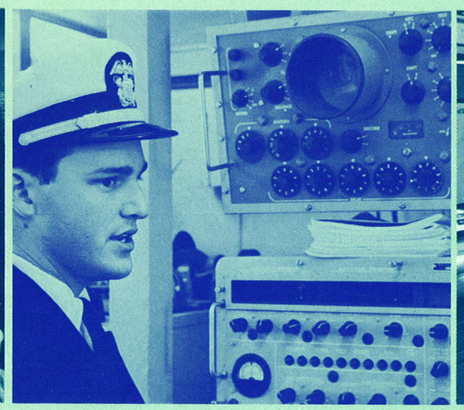
HYDROLOGISTS at NOAA are concerned with floods and flood forecasting, river flow analysis, and supporting research in related areas. River forecast stations are located in the major river basins, and issue flood forecasts and warnings as required. On the research side, NOAA hydrologists seek to improve their comprehension of the hydrologic cycle—the movement of water between the earth, oceans, and atmosphere—and to develop new computer applications for hydrologic projects.

ENGINEERS at NOAA find challenging assignments across the full range of environmental science and service activities. General, electrical, electronic, and mechanical engineers develop instrumentation and equipment used in NOAA's investigation of the physical environment. Engineers develop advanced equipment for underwater measurements, like the recently developed stable underwater platform for marine magnetic measurements, and formulate requirements for new mechanical and instrument systems. NOAA engineers develop new environmental satellite sensors, shipboard data and navigational equipment, geodetic distance-measuring devices, meteorological instruments, infrared applications, and telemetry devices. Civil engineers with field teams conduct precise geodetic surveys, astronomic observations, photogrammetric control, and related operations.

GEODESISTS are concerned with determining the precise size and shape of the earth and the location of points on its surface. Part of this work involves development and maintenance of the precise geodetic network which spans the continent; this is accomplished by survey teams in the field, and by office geodesists and mathematicians at NOAA headquarters. Gravity surveys and theoretical studies are also part of a geodesist's work with NOAA's National Ocean Survey and Environmental Research Laboratories.

MATHEMATICIANS use their training in virtually every phase of NOAA activities, an indication of the trend toward automation—and away from drudgery—in environmental sciences. NOAA mathematicians work as computer programmers, develop computer applications to weather and sea state forecasting, perform geodetic computations, process geophysical, meteorological, and oceanographic data, and participate in mathematics research.





CARTOGRAPHERS construct the aeronatucial and nautical charts of NOAA's National Ocean Survey, to the Survey's high standards of accuracy. They also develop maps of earthquake areas, bathymetric charts, and other cartographic products, working in fixed locations and with mobile teams or ships in the field. NOAA cartographers also perform professional work in photointerpretation, analytic photogrammetry, and aerotriangulation.

FISHERY BIOLOGISTS study the problems of growth and reproduction of fish and shellfish, attack the problems of disease, and identify and study subdivisions of oceanic stocks. To carry out this research, NOAA's fishery biologists study the life history, habits, classification, and economic relations of aquatic organisms to ensure an adequate and dependable supply of fish and shellfish, and the conservation and growth of the fishing industry. They study the effects of environmental and man-made changes on fish, determine rearing and planting for maximum success in hatchery operations, and devise ways to regulate fishing to ensure a continuing, maximum yield. Specialization is often possible in such fields as embryology, histology, physiology, serology, and virology. NOAA's fishery biologists work primarily in the National Marine Fisheries Service.

OCEANOGRAPHERS are scientists whose interests are primarily with the global ocean—its physical properties and dynamics (the circulation or currents of the waters), its interaction with the air and land; its chemical composition; the contours, structure or composition of the ocean floor; and the habits and interrelationships of the plants and animals that inhabit the levels of the sea. The work of NOAA's oceanographers covers an exciting variety of scientific activities, including the study of tsunamis (sea waves), the development of new underwater sensors, and the establishment of data systems that will achieve maximum use of their output, the study of tidal and current variations, the compilation of special bathymetric charts as part of the Nation's ocean survey (SEAMAP) program, the study of the marine environment and its effect on the distribution and abundance of commercially valuable fish, and the development of oceanographic models that help to monitor changes in the marine environment, the development and production of computer displays of oceanographic variables, and participation in national and international exploratory programs.

NOAA's oceanographers are located in the National Ocean Survey, the Environmental Research Laboratories, and the National Marine Fisheries Service.

CHEMISTS work primarily in NOAA's National Marine Fisheries Service and carry out research to develop new and better fish products for food and industrial uses. NOAA's chemists also investigate methods to improve the handling, processing, preserving, and distribution of fish, fish products, and shellfish. They may also develop information on sanitation measures and requirements for standards to be set by the Federal government for fishery products. One result of the research carried out by chemists of the National Fisheries Service has been the development of a Fish Protein Concentrate, a substance derived from fishery products which may help alleviate the protein starvation which is prevalent among two-thirds of the world's population.

NOAA also offers a wide variety of opportunities in other areas. In addition to a continuing need for systems analysts, accountants, and auditors, opportunities exist in NOAA in administrative areas.

THE NOAA CORPS is a professional uniformed career service for engineers and scientists whose abilities match the environmental challenge. For information on careers as a commissioned officer in the NOAA Corps, write Director, NOAA Corps, 6010 Executive Blvd., Rockville, Maryland, 20852.

NOAA EMPLOYMENT INQUIRY

SEND TO: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
EMPLOYMENT BRANCH
Rockville, Maryland 20852

I want to know more about the challenging careers in environmental science which NOAA has to offer. Please send me information about specific career areas for which I appear qualified, as well as application forms to apply for positions if I wish to do so.

NAME: Mr. / Miss / Mrs. _____

SCHOOL ADDRESS: _____
Street No. City State Zip Code

HOME ADDRESS: _____
Street No. City State Zip Code

PHONE NUMBER: _____
Area Code Local Number

DATE OF BIRTH: _____ CITIZENSHIP: _____

DRAFT STATUS: _____ MARRIED: _____ DEPENDENTS: _____

HEIGHT: _____ WEIGHT: _____ DATE AVAILABLE FOR EMPLOYMENT: _____

EDUCATION:

COLLEGE	MAJOR	DEGREE	DATE	APPROX. CLASS STANDING	APPROX. GRADE POINT AVERAGE

THESIS SUBJECT (if applicable): _____

SCHOLASTIC HONORS: _____

PRIMARY JOB INTEREST: _____

_____

CAREER-RELATED EXPERIENCE (give dates and employers): _____

GEOGRAPHICAL PREFERENCES OR RESTRICTIONS: _____

I do / do not have a current eligibility rating under a Civil Service Announcement.
(If so, what announcement?): _____

OTHER REMARKS: _____

SIGNATURE _____ DATE _____

As we cross the threshold of a new exploratory age, as our grasp moves toward other planets and the stars, our great preoccupation turns increasingly homeward, to "Spaceship Earth," the garden of life in what may turn out to be a barren solar system. To those whose talents and imaginations are engaged by large unknowns, this planet presents an infinity of processes and interactions linking life and the physical world, and man-generated depredations with planetary survival.

NOAA, the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce, is a leader in the national effort to comprehend these relationships and to improve man's uses of the physical environment and oceanic life.

NOAA scientists and engineers measure processes within the global ocean, study interactions among sea and land and sea and atmosphere, and map the geophysical structure and resources of the ocean floor. They describe and conserve the living resources of the sea, seek to develop new ones, and link the responses of marine life to environmental changes. They survey the varied faces of the continents, monitor seismic activity, earth magnetism, and gravity, and the effects of solar radiation on the earth and near-earth environment. They monitor and predict conditions in the atmosphere and ocean, and issue timely warnings against such destructive natural events as hurricanes, tornadoes, winter storms, tsunamis, and floods, and the potentially disruptive environmental changes which occur over decades, generations, centuries. They are learning how man may modify the environment, constructively and destructively, deliberately and inadvertently, and they are applying this knowledge to the benefit of the Nation and humankind.

It is work on a global scale, over a broad range of earth-looking disciplines, using as tools a mix of artificial satellites, instrumented aircraft, research ships, automated sensor stations, laboratories, giant computers. For those who qualify, it is a singular opportunity to excel.

EMPLOYMENT BENEFITS

VACATIONS:

Each year, depending upon their length of service, employees earn from 13 to 26 days of annual leave for vacation. Active military service in most cases counts as civilian service.

HOLIDAYS:

Employees are given nine national holidays each year: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, and Christmas Day.

OTHER LEAVE:

Sick Leave: Each year employees earn 13 days' sick leave to be used for illness or medical, dental, or optical appointments. Unused sick leave accumulates without limit, and provides employees with excellent financial protection for periods of prolonged illness or injury.

Military Leave: Members of the National Guard or of the Army, Navy, or Air Force Reserves are entitled to military leave for training or other active duty. A maximum of 15 calendar days is allowed each year with full pay and without charge against other types of leave.

EDUCATION AND TRAINING:

NOAA employees are encouraged to further their education and training. They may be assigned at full pay to a university for full-time graduate work or other advanced study related to their duties. Fees and travel expenses are also provided for approved attendance at professional conferences, conventions, and seminars. NOAA also pays tuition for all applicable part-time college courses approved for employees.

LIFE INSURANCE:

Group Life Insurance is available at a cost of only 27½¢ each two weeks for every $1,000 of insurance. The amount of regular insurance depends on the employee's basic annual pay. If an employee has the regular insurance, he may also elect optional insurance in the amount of $10,000. The cost depends on the employee's age.

HEALTH INSURANCE:

Several Group Health Insurance plans are available to full-time employees that include Hospital, Surgical, and other related benefits. The cost of insurance and other benefits depends on the type of plan selected and the coverage desired. The Federal Government will pay up to one-half the cost of health insurance.

MEDICAL COMPENSATION BENEFITS:

Any employee receiving an on-the-job injury or service-connected illness is entitled to medical attention, hospitalization and compensation free of charge. Compensation payments are at least two-thirds of an employee's salary.

RETIREMENT SYSTEM:

One of the outstanding advantages of NOAA employment is the model Federal Civil Service Retirement System. It provides for liberal annuities based on a combination of average salary and length of service.

TRAVEL AND MOVING EXPENSE:

NOAA pays travel and moving expenses to the first duty station for most scientific positions. These expenses are paid for all employees when they are required to change duty stations.

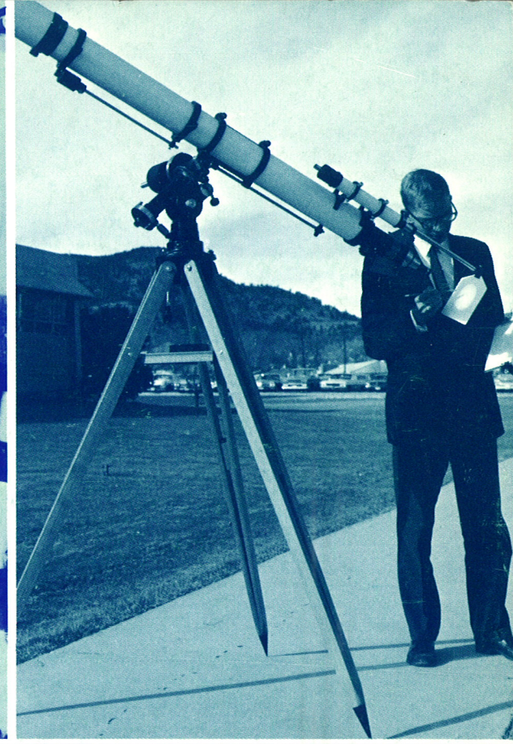
EQUAL EMPLOYMENT OPPORTUNITY:

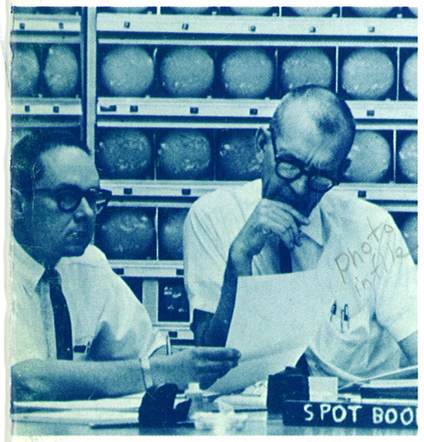
NOAA follows a policy of equal opportunity in recruitment, training, promotion, and all other aspects of employment for all employees, regardless of their race, religion, sex, or lawful political affiliation.

NOAA/PA 70032 1971

☆ GPO : 1972 O - 456-862


Photo in file Great Lakes




SPOT BOO